

Claims

1. A holding and positioning assembly for securing surgical accessory instruments in place during surgery, said assembly comprising a swiveling and rotatable seat for the accessory instruments, said seat including means for gripping the instruments and said seat being linked to a mechanical arm via a multi-directionally movable joint mechanism, said mechanical arm being operative to prevent body cavity wall rupture during orientation of the instrument in the body cavity, and said mechanical arm being manually maneuverable to alter the position of said seat in said assembly.
2. The assembly of Claim 1 wherein said mechanical arm is sufficiently elastic so as to bend before the tensile strength of the tissue of a surgical patient is reached during maneuvering of the assembly during surgery.
3. The assembly of Claim 2 wherein the elasticity of said mechanical arm is controlled by the material that said mechanical arm is formed from.
4. The assembly of Claim 2 wherein the elasticity of said mechanical arm is the result of swiveling joints formed in said mechanical arm.
5. The assembly of Claim 4 wherein said swiveling joints are biased by torsion springs.
6. The assembly of Claim 4 wherein said swiveling joints include elastomeric components.
7. The assembly of Claim 1 wherein rupture of the body cavity wall is prevented by restricting the degree of operative motion of said mechanical arm.
8. The assembly of Claim 8 wherein the degree of operative motion of said mechanical arm is restricted to a cone having an included angle of no more than about 35°.
9. A method of using a holding and positioning assembly for securing surgical accessory instruments in place during surgery, said assembly comprising a swiveling and rotatable seat for the accessory instruments, said seat including means for gripping the instruments and said seat being linked to a mechanical arm via a multi-directionally movable joint mechanism which mechanical arm being manually maneuverable to alter the position of said seat in said assembly, said method including the step of positioning said swiveling and rotatable seat a distance from an incision in a patient during surgery, which distance is about 3 cm or less so as to prevent rupture of a patient's tissue during movement of said mechanical arm during surgery.

10. The method of Claim 9 comprising the further step of limiting the range of possible motion of said mechanical arm to a cone having an included angle of about 35° or less.